REMARKS

Applicants thank the Examiner for the courtesy of a personal interview to discuss the above-referenced application and the Office Action dated January 25, 2001. The results of said interview are substantially summarized in an Examiner Interview Summary Record dated May 16, 2001.

In the amendments above, Claims 1, 3, 18, 30, and 47 have been amended to more particularly point out and distinctly claim Applicants' invention. More particularly, the language added to Claims 1, 18, 30, and 47 is intended to assist in emphasizing the differences between Applicants' invention and the Prystowsky et al. patent.

Claims 1-3, 10, 13, 14, 18-21, 30, 31, 35, 37, 38, 44, 47, 49, 51, and 58 were rejected under 35 U.S.C. § 102(b) as being unpatentable over the Prystowsky et al. patent. Applicants respectfully traverse this rejection.

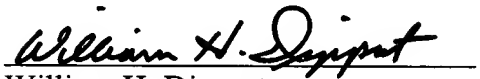
As was discussed with the Examiner, Prystowsky et al. teaches that a signal (Sc) can be applied to the heart after each initial S_1 signal, preferably during the refractory period. The purpose of the Sc signal is to prevent something, namely, generation of an arrhythmic S_2 signal. In contradistinction, according to the invention herein a non-excitatory signal is applied to the heart or a portion thereof to cause something to happen, namely, an activity in the heart or a portion thereof. Claims 1, 18, 30, and 47 have been amended to clarify this distinction.

Applicants submit that the claims herein are now clearly patentable over the Prystowsky et al. patent and that the rejection under § 102(b) has been overcome.

The indication of allowance of Claims 16, 17, 24-27, 46, and 52-57 and the indication of allowable subject matter in Claims 4-9, 11, 12, 15, 22, 23, 28, 29, 32-34, 36, 39-43, 45, 48, 50, 59, and 60 are appreciated.

Reconsideration and allowance of all the claims herein are respectfully requested.

Respectfully submitted,



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Shlomo BEN-HAIM, et al.

Serial No.: 09/101,723 Examiner: C.H. Layno

Filed: August 13, 1998 Group Art Unit: 3737

For: CONTROLLING HEART PERFORMANCE USING A NON-EXCITATORY ELECTRICAL FIELD

(Submission to Accompany Response to Office Action, dated May 22, 2001)

Version of Amended Claims with Markings to Show Changes Made

1. (Twice Amended) A method of modifying the activity of the heart[,] or of a portion thereof, comprising applying to said heart[,] or a portion thereof a non-excitatory electric field of a magnitude, shape, duty cycle, phase, frequency and duration suitable to obtain a desired change, to modify an activity of the heart or a portion thereof, wherein said field is applied at a time at which it is unable to generate a propagating action potential.

3. (Twice Amended) A method according to claim 1, wherein the step of applying a non-excitatory electric field comprises applying an [alternated] alternating current electric field.

18. (Twice Amended) A method of reducing an output of a chamber of a heart, comprising applying to a portion of said heart chamber a non-excitatory electric field of a magnitude, shape, duty cycle, phase, frequency and duration suitable to obtain a desired change, to modify an activity of the heart or a portion thereof, wherein said field is applied at a time at which it is unable to generate a propagating action potential, and wherein reducing the output of the chamber is obtained by reducing the reactivity of said portion, or its sensitivity, to an activation signal, or by reversibly blocking its conduction pathway.

30. (Twice Amended) Heart control apparatus, comprising circuitry for generating a non-excitatory electric field, and electrodes for applying to a heart or to a portion thereof said non-excitatory electric field to modify an activity of the heart or a portion thereof, wherein

said circuitry for generating a non-excitatory electric field [generate] generates a field with a timing relative to the activation of the heart or of a portion thereof, and of a magnitude, shape, duty cycle, phase, frequency, and duration which is unable to generate a propagating action potential.

47. (Twice Amended) Cardio-vascular surgery aiding apparatus, comprising circuitry for generating a non-excitatory electric field, and electrodes for applying to a heart chamber or to a portion thereof said non-excitatory electric field to modify an activity of the heart or a portion thereof, wherein said circuitry for generating a non excitatory electric field [generate] generates a field of a magnitude, shape, duty cycle, phase, frequency and duration suitable to reduce the output flow, contractility, or pressure of said chamber, when surgery is performed on tissue perfused by the flow of said chamber, and wherein said field is unable to generate a propagating action potential, and thereafter performing the required surgical procedure on said area.